

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit 1511 :
In re application of :
EDWARD W. MCGOVERN : PAVEMENT REJUVENATOR AND
Serial No. 08/429,581 : DRESSING CONDITIONER WITH
Filed April 27, 1995 : ELASTOMER
Examiner - P. Szekely :

Pittsburgh, Pennsylvania

DECLARATION

Hon. Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

I, Edward W. McGovern, declare as follows.

1. I hold a Bachelor of Science Degree in Chemical Engineering from the University of Pittsburgh; my industrial experience in the paving industry includes research and development work completed in Australia to enable highway paving with high-temperature coke oven tar; and at the South African Iron and Steel Corporation I pioneered the development of road grade tar from coke oven tar.

2. I am the inventor of the subject matter of the above-identified patent application and am thoroughly familiar with the disclosure of the specification and claims thereof. The invention is a combination of a specifically defined coal tar derivative with a quantity of elastomer, the coal tar derivative being defined both chemically and by characteristics in the pending claims of this application.

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O.K. to Enter
P.S.
7/19/96

3. It was entirely unexpected that addition of an elastomer to a coal tar derivative would have improved the pavement rejuvenation properties of the coal tar derivative. As Examiner Szekely points out in Paper No. 6, the primary references of record do not identify the elastomeric component of the claimed invention, whereas only the secondary references "show rubber or rubber latex added to pavement coating compositions where it serves to improve better bonding between the dressing and the old pavement." The rejection of record is therefore a prima facie rejection based upon the extrapolation of a teaching to combine asphalt with elastomer purportedly to make obvious a similar combination of elastomer with a coal tar derivative. The following tests and test results document how the present invention would not have been suggested by any prior art teaching of adding elastomer to asphalt--because the results achieved with the present combination were not apparent from the combination of asphalt with elastomer at all.

4. I took a quantity of the coal tar derivative in question, in solution in a solvent (the composition was " A sealing and rejuvenating composition for bituminous and concrete surfaces comprising 40-60% by weight of topped coke oven tar having a float test of 50-300 seconds at 50° C., 20-35% by weight of an aromatic solvent having API Gravity at 60° F. of from 11-30, Specific Gravity 60/60° F. of from 0.876-0.933, IBP (initial boiling point) between 310 and 450, DP ([dye]) dry point) of between 350 and 550, and a Flash pt. °F.TCC of from 110-250, and 15-35% by weight of a mixture of di-, tri- and tetracyclic aromatic compounds and their alkyl homologs

containing lower alkyl groups together with 1-10% by weight of phenolic and hydroxy derivatives, said mixture being derived from the distillation of coal tar, said mixture having a specific gravity of 25/25° C. of at least 1.08 and an initial boiling point of at least 180° C., a continuous boiling range to at least 300° C., with a distillation curve to 300° C., 70-40% of the material remaining as residue at 300° C., the distillate at 300° C. having a minimum specific gravity at 25/25° C. of about 1.025.") and disbursed therethrough 3% latex polymer in which the polymer was acrylonitrile butadiene. Five hundredths of a gallon per square yard (0.05 gal/yd²) was spread over pavement test panels to create a coating approximately 5/100ths inch thick, and one pound per square yard of fine sand was applied in a layer thereover. Separate control pavement test panels were similarly coated with the composition (without acrylonitrile butadiene) and sand. Third and fourth sets of pavement test panels were similarly coated--some with asphalt containing 3% added elastomer (latex acrylonitrile butadiene), coated with sand, and the remainder with asphalt free from elastomer, coated with sand. Amounts of sand retained by the coating were calculated and recorded. All panels were coated and covered with sand at the same time, and were allowed to cure under ambient conditions for the same period of several days.

5. I set up an abrading instrument comprising a power drill bearing a standard buffing wheel and sequentially subjected each panel to the same application of force therefrom for the

same period of time (30 seconds). I then measured sand loss from the panels after the buffing operation and obtained the resulting data as shown in Table I.

TABLE I

<u>Test Panels</u>	<u>Percentage Sand Loss</u>
asphalt without elastomer	12%
asphalt plus elastomer	10%
coal tar derivative without elastomer	10-11%
coal tar derivative plus elastomer	0%

6. As shown in Table I, the addition of elastomer to the coal tar derivative according to the present invention gave astonishingly and unexpectedly improved results over asphalt with or without elastomer or the coal tar derivative alone. These unexpected results rebut the prima facie obviousness rejection because nothing in the art taught any method or composition to achieve such a result.

7. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

July 3, 1996
Date

Edward W. McGovern
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